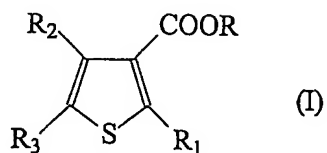


CLAIMS

1. A solid catalyst component for the polymerization of olefins comprising Mg, Ti, halogen and an electron donor selected from thiophene derivatives of formula (I)



- wherein R is a branched alkyl group, R₁, R₂ and R₃, same or different, are hydrogen, halogen, R⁴, OR⁴, COOR⁴, SR⁴, NR⁴₂ and PR⁴₂, wherein R⁴ is a linear or branched C₁-C₂₀ alkyl, C₂-C₂₀ alkenyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkylaryl or C₇-C₂₀ arylalkyl group, optionally containing one or more heteroatoms, and two or more of said R₁-R₃ groups can also be joined to form a cycle, with the provisions that at least one of R₁ and R₂ is COOR⁴ and that when R₂ is COO-i-octyl and R is i-octyl, R₁ and/or R₃ are different from hydrogen.
2. The catalyst component according to claim 1 in which in the thiophene derivatives of formula (I) R is a primary branched alkyl having from 4 to 15 carbon atoms.
 3. The catalyst component according to claim 1 in which in the thiophene derivatives of formula (I) R₂ is a COOR group.
 4. The catalyst components according to claim 3 in which R₁ and/or R₃ is a C₁-C₂₀ alkyl group.
 5. The catalyst component according to claim 1 in which in the thiophene derivatives of formula (I) R₁ is a COOR group.
 6. The catalyst components according to claim 5 in which one of R₂ and R₃ of formula (I) are different from hydrogen.

7. The catalyst component of claim 1 comprising a titanium compound having at least a Ti-halogen bond and the thiophene derivatives of formula (I) supported on a Mg halide in active form.
8. A catalyst for the polymerization of olefins comprising the product of the reaction between:
 - a solid catalyst component according to any of the claims 1-7;
 - an alkylaluminum compound and, optionally,
 - one or more electron-donor compounds (external donor).
9. The catalyst according to claim 8 in which the alkylaluminum compound (b) is a trialkyl aluminum compound.
10. Process for the (co)polymerization of olefins carried out in the presence of any of the catalysts of claims 8-9.